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Series B

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ERRATA

(lines are counted from the beginning of the bibliographic data in each item.)

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Page	*Abstract*	*Line*	
32	155	4	for 'Anthomyids' read 'Anthomyiids'
47	227	8	for '*europeus*' read '*europaeus*'
90	392	1	for 'Ixodidae variegatum' read 'Comments on the *Amblyomma variegatum*'
102	430	13	for '*brasiliensis*' read '*braziliensis*'
129	526	4	for 'OF *O. ovis* and the' read 'An account is given'
134	545	6	for 'heamatophagous' read 'haematophagous'
171	699	21	for 'θ BHC' read 'γBHC'
172	701	10	for 'polyacrilamide' read 'polyacrylamide'
179	739	7	for '*A. dianteus*' read '*A. diantaeus*'
191	791	17	for 'invetebrates' read 'invertebrates'
194	802	3	for '*Entomoligique*' read '*Entomologique*'
225	918	15	for '*Merus*' read '*merus*'
228	928	3	for 'Sanitaria Panamericana' read '*Sanitaria Panamericana*'
236	952	23	for '[*cf. RAE/B 59*, 1648]' read 'the latter rate, larvae'
244	983	7	for 'laboratory Al Azhar University,' read 'investigations on *Haematobia*'
245	986	15	for 'myristoieic' read 'myristoleic'
256	1078	8	for 'the annual rainfall results showed that' read 'the rainfall was 746 mm in 1967 and'
267	1119	12	for 'tetrahydro-2-benzothiozolylmethyl' read 'tetrahydro-2-benzothiazolylmethyl'
268	1120	12	for 'last' read 'best'
287	1202	14	for '*riatoma*' read '*Triatoma*'
287	1202	27	for 'T. maculata' read '*T. maculata*'
287	1202	33	for 'Juberg' read 'Jurberg'
301	1252	3	for 'Culex pipiens fatigans' read '*Culex pipiens fatigans*'
316	1303	15	for 'Maputta' read 'Mapputta'
324	1334	11	for 'Glossina' read '*Glossina*'
325	1334	12	for '*albiceps* (Wied.) (*putoria* Wied.)' read '*putoria* Wied.'
327	1342	2	for '*Grunin*' read 'Grunin'
348	1415	12	delete 'sugar (10%),'
381	1536	10	for 'Blatta' read '*Blatta*'
394	1582	2	for 'alicyclc' read 'alicyclic'
403	1605	2	for 'polynesiensis' read '*polynesiensis*'
411	1632	14-16	for '*is a distinct but extremely variable species that may be a relict population of an ancestral type from wich*' read 'is a distinct but extremely variable species that may be a relict population of an ancestral type from which'
413	1641	5-6	for '*Giles. Only Tahyňa virus multiplied without any cytopathic effect.*' read 'Giles. Only Ťahyňa virus multiplied without any cytopathic effect.'
417	1656	6	for '*Foote & Pratt*,' read 'Foote & Pratt,'
418	1660	3	for '*E*ndemic Diseases' read '*Endemic Diseases*'

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420	1666	2	for '*(Wedl, 1856) and*' read '**(Wedl, 1856) and**'
422	1673	5-6	for '*Turner (the type species) and*' read 'Turner (the type species) and'
425	1683	6	for 'Nematicide' read 'Nemacide'
426	1685	14	for '*56, 60,* 568 1554' read '*56,* 568; *60,* 1554'
427	1687	2	for '**Dihydroecdysone**' read '**Dehydroecdysone**'
427	1688	14	for '*enteriditis*' read '*enteritidis*'
430	1695	2	for '*Record*' read '*Record*'
435	1716	14-15	for '*buta-1,3-dienyl substituent was 3 times as toxic as bioresmethrin, that with a 2,2-*' read 'buta-1,3-dienyl substituent was 3 times as toxic as bioresmethrin, that with a 2,2-'
436	1716	16	for '*dichlorovinyl substituent was 2.5 times as toxic, and those with*' read 'dichlorovinyl substituent was 2.5 times as toxic, and those with'
441	1740	2	for '*ticks*' read 'ticks'
444	1749	8	for 'Syncerus caffer' read '*Syncerus caffer*'
448	1764	6	for 'for the pathology of' read 'of mites of the species'
452	1782		this abstract should appear under 'Other Insect Orders'
473	1845	11	for 'dichlorobenzyl' read 'dichlorobenzoyl'
477	1857	9	insert '(' after 'May'
490	1899	11	for '*RAE/B*' read '*RAE/B 61*,'
507	1948	9	for '4mg/mg' read 'μg/mg'
534	2062	20	for 'dimethylchlordimeform' read 'demethylchlordimeform'
565	2176	8	delete ')' after 'L.'
583	2231	17	for '*Plasmodia*' read '*Plasmodium*'
583	2233	9	for '*Major* (tropica major)' read '*major (tropica major)*'
584	2236	7	for 'L. major' read '*L. major*'
595	2269	11	for 'serum and globulins' read 'serum γ globulins'
604	2298	6	for 'DeGeer, the' read 'DeGeer parasitised with the'
613	2333	10	for '38' read '8'
618	2353	6	for 'Copenhagen V, Denmark' read 'Republic of Egypt.'
618	2353	9	for 'briefly reviews the' read 'the species and its'
625	2377	6	for 'larvae' read 'larva'
625	2377	16	for 'I. kaiseri' read '*I. kaiseri*'
627	2386	3	for '*aNNALES DE*' read '*Annales de*'
636	2415	10	for 'predominatly' read 'predominantly'
645	2446		This abstract should appear under 'Simuliidae'
646	2450	19	for '*spilopsyllus*' read '*Spilopsyllus*'
653	2473	9	for 'morocco' read 'Morocco'
654	2479	6	insert 'when added to the water surface' after 'octanol'
657	2488	2-3	for 'American Journal of Tropical Medicine and Hygiene' read '*American Journal of Tropical Medicine and Hygiene*'

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665		7	insert '2446,' before '2457'
668	2527		This abstract should appear under '**Siphonaptera**'
671	2539	3	for '*physiology*' read '*Physiology*'
680	2575	2	for '*ixodes*' read '*Ixodes*'
682		21	insert '2596,' after '2494'
683	2587	1	for 'RAO, N.S.K.,' read 'RAO, N.S.K.;'
684	2592	19	for 'specially' read 'specifically'
685	2596		This abstract should appear under 'Mites (Other Acari)'
701	2640	6	for 'mts.' read 'Altai'
703	2644	14	for 'vilis' read '*vilis*'
737	2766	6	for 'phenomenom' read 'phenomenon'
760	2847	6	for 'cf. RAE/B 60' read '*cf. RAE/B 60*'
786	2940	4-5	for 'Comptes Rendus des Séances de la Société de Biologie' read '*Comptes Rendus des Séances de la Société de Biologie*'

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SUBJECT CLASSIFICATION IN RAE

Subject classification of material selected for inclusion in the *Review* is performed in two stages. The first stage is the assignment of one or more sequence codes to each document, to determine the heading under which the abstract or title will be printed and other headings under which 'see also' cross-references will appear. The second stage is the selection of entries for the printed subject index. There is no thesaurus used to select headings, but they are mainly concrete subjects and are carefully checked to keep synonymy to a minimum. Vocabulary control is aided by the inclusion of inverted arthropod names, and of cross-references and synonyms for other organisms and for chemicals. A list of subheadings suitable for most subjects is maintained, and further subheadings are chosen as needed. The result of this method of indexing is a high level of consistency within each volume and a close match between headings in successive volumes; cross-references are given whenever headings are changed. The depth of indexing is such that there is a mean of 7.1 entries per abstract or title, though there may be more than one subheading per heading for any particular abstract. The most detailed entries are those under the names of arthropods, but other organisms, countries, chemicals, and general subjects (e.g. Conferences; Irrigation; Rearing techniques) are also used as headings. More use has been made of habitat headings than in previous volumes, and some Medical Subject Headings have been introduced for immunological and medical topics. All references are to abstract numbers.

Under the names of arthropods there are references to their control, distribution, hosts, natural enemies, taxonomy, vector ability, and miscellaneous subjects. Entries for species will be found under the generic name, and there are also inverted names with the specific and subspecific epithets placed first. The names used for arthropods in this index are those used in the abstracts, because these names have all been checked against the card indexes maintained by the Institute. These card indexes are continuously updated to take account of taxonomic revisions, and in cases of difficulty the taxonomists employed by the Institute or by the British Museum (Natural History) are consulted. If two or more names are accepted by the *Review* for a taxon during one year, each name is entered separately, with a 'see also' cross-reference to other names. Cross-references from names used by authors but not accepted by the *Review* are given to the currently-accepted names.

Animals other than arthropods are indexed to specific level only, under English common names for the more important domesticated birds and mammals or under scientific names. At both these types of heading will be found references to the arthropods that affect the animal concerned, to arthropod-transmitted pathogens, and to the side-effects of pesticides. Cross-references are given between common names (sometimes inverted) and scientific names.

Pathogens of animals other than arthropods are indexed at the name of the pathogen, the scientific name if one is available, or else the English common name. Some entries will also be found at the names of diseases (sometimes inverted). Viruses pathogenic for arthropods are indexed under the name of the host, and the hosts are listed at the heading 'Viruses and virus diseases'. Other

pathogens of arthropods are indexed at the scientific name of the pathogen.

Geographical locations are keyworded, as appropriate, to faunal regions, continents, countries, archipelagoes or islands, and, for Australia, Canada and the USA, to States and Provinces. The subheadings refer mainly to pest arthropods, with some references to pest control and to diseases.

Habitat headings are used much more in this volume than in previous ones. Whenever possible, headings have been chosen which begin with either the name of a vertebrate (e.g. Cattle sheds; Poultry houses) or of a crop (e.g. Banana plantations; Rice-fields), though stands of trees grown for timber are indexed under 'Forests' or 'Woodland'. In most other cases, inverted names have been selected as headings (e.g. Forests, broadleaved; Ponds, temporary; Swamps, mangrove). Subheadings are mostly concerned with the distribution of arthropods.

Chemicals are normally indexed under either a common name or a systematic name. The common names used at present for pest-control chemicals are listed in the Editorial to volume 59 (1971). A few unidentified or complex substances are indexed under names used by authors, and all remaining substances are indexed under the names used in the indexes of *Chemical Abstracts* volumes 76-85. Cross-references are provided to these inverted systematic names, and in some cases synonyms are given with the entries. Cross-references are also provided from inverted systematic names to the common names used for pest-control chemicals, and definitions are printed at these headings. Appropriate systematic names are listed at the heading 'Pest-control chemicals', in the uninverted form used in abstracts.

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East African Virus Research Institute 2149
Annual reports (1970)
Branch of Tsetse and Trypanosomiasis Control, Min. of Ag., Rhodesia 1897
Danish Pest Infestation Laboratory 2606
East African Trypanosomiasis Research Organisation 1896
East African Veterinary Research Organisation 2344
East African Virus Research Institute 2150
Annual reports (1971)
Branch of Tsetse and Trypanosomiasis Control, Min. of Ag., Rhodesia 1898
CSIRO Division of Animal Health 1127
Danish Pest Infestation Laboratory 2607
East African Trypanosomiasis Research Organisation 2718
East African Veterinary Research Organisation 1944
East African Virus Research Institute 1234
Annual reports (1971-72), CSIRO Division of Entomology 679

Annual reports (1972)
Danish Pest Infestation Laboratory 2072
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